

Treatment Intervention Advisory Committee Review and Determination

Date: October 30, 2015

To: DHS/DLTC

ACK

From: Wisconsin Department of Health Services Autism and other Developmental Disabilities
Treatment Intervention Advisory Committee: Lana Collet-Klingenberg, Ph.D. (chairperson)

RE: Determination of Massage Therapy as a proven and effective treatment for individuals with autism spectrum disorder and/or other developmental disabilities

This is an initial review

This is a re-review. The initial review was October 31, 2014

Section One: Overview and Determination

Please find below a statement of our determination as to whether or not the committee views Massage Therapy as a proven and effective treatment for children with autism spectrum disorder and/or other developmental disabilities. In subsequent sections you will find documentation of our review process including a description of the proposed treatment, a synopsis of review findings, the treatment review evidence checklist, and a listing of the literature considered. In reviewing treatments presented to us by DHS/DLTC, we implement a review process that carefully and fully considers all available information regarding a proposed treatment. Our determination is limited to a statement regarding how established a practice is in regard to quality research. We do not make funding decisions.

Description of proposed treatment

Massage therapy involves the provision of deep tissue stimulation. There are various types of massage therapy, including Qigong and others. From <http://www.massageqigong.com> (retrieved 9/25/14) “The Massage Qigong bridges the Eastern traditional approach and the Western pragmatic and research oriented approach as they were both used in the creation of that specific technique. The Massage Qigong, also called Qigong Sensory Therapy, is a set of 12 movements improving the overall blood and energy circulation of the child with Autism or sensory processing difficulties. The massage is directed at acupressure points and channels on the body. This Massage is also a dual therapy. The therapist and the parent(s) work together in giving the massage to the child. The therapist trains the parent(s) in giving a fun and simple form of the massage (15 minutes). This massage anchors the progress made in the therapy sessions and strengthens the parent-child bond.”

Synopsis of review

In the case of Massage Therapy, please refer to the attached reference listing that details the reviewed research. The committee’s conclusions regarding Massage Therapy include the following findings:

- Since the prior review of October 2014, only one new study met criteria for inclusion. This study (Silva et al., 2015) utilized Qigong massage with young children with ASD, and found significant improvements in parent rated scales of sensory problems and autism symptoms on the ABC, CARS autism severity rated by blinded researchers, and receptive language on a

standardized language assessment done by blinded researchers. All of these findings were specific to a Qigong group as compared to a control group.

- Massage therapy was last reviewed and determined as a Level 3 therapy- Emerging evidence in October 2014. Although the new study reviewed here was high quality and showed positive findings, moving to a Level 2 requires that at least one professional body acknowledges at least minimal evidence of efficacy of the treatment. However, no professional body currently acknowledges minimal evidence, and instead either 1) fails to list Massage Therapy as having an evidence base (ASHA evidence maps); 2) report that Massage Therapy has insufficient evidence (National Professional Development Center), or 3) report it as having emerging evidence (National Standards Project).

In sum, it is the decision of the committee that Massage Therapy does have an emerging body of evidence with recognition by at least one authoritative body as having emerging evidence, and at least one high quality study demonstrating promising results, thus continuing to warrant a Level 3 - Emerging Evidence (DHS 107 - Promising as proven & Effective Treatment) recommendation. **This determination is specific only to Qigong Massage**, as the bulk of the research is on this form of massage therapy

Section Two: Rationale for Focus on Research Specific to Comprehensive Treatment Packages (CTP) or Models

In the professional literature, there are two classifications of interventions for individuals with Autism Spectrum Disorder (National Research Council, 2001; Odom et al., 2003; Rogers & Vismara, 2008):

- (a) **Focused intervention techniques** are individual practices or strategies (such as positive reinforcement) designed to produce a specific behavioral or developmental outcome, and
- (b) **Comprehensive treatment models** are “packages” or programs that consist of a set of practices or multiple techniques designed to achieve a broader learning or developmental impact.

To determine whether a treatment package is proven and effective, the Treatment Intervention Advisory Committee (TIAC) will adopt the following perspective as recommended by Odom et al. (2010):

The individual, focused intervention techniques that make up a comprehensive treatment model may be evidence-based. The research supporting the effectiveness of separate, individual components, however, does *not* constitute an evaluation of the comprehensive treatment model or “package.” The TIAC will consider and review only research that has evaluated the efficacy of implementing the comprehensive treatment *as a package*. Such packages are most often identifiable in the literature by a consistently used name or label.

National Research Council. (2001). *Educating children with autism*. Washington, DC: National Academy Press.

Odom, S. L., Brown, W. H., Frey, T., Karusu, N., Smith-Carter, L., & Strain, P. (2003) Evidence-based practices for young children with autism: Evidence from single-subject research design. *Focus on Autism and Other Developmental Disabilities, 18*, 176-181.

Odom, S. L., Boyd, B. A., Hall, L. J., & Hume, K. (2010). Evaluation of comprehensive treatment models for individuals with Autism Spectrum Disorders. *Journal of Autism and Developmental Disorders, 40*, 425-436.

Rogers, S., & Vismara, L. (2008). Evidence-based comprehensive treatments for early autism. *Journal of Clinical Child and Adolescent Psychology, 37*, 8-38.

Section Three: DLTC-TIAC Treatment Review Evidence Checklist

Name of Treatment: Massage Therapy

Level 1- Well Established or Strong Evidence (DHS 107 - Proven & Effective Treatment)

- Other authoritative bodies that have conducted extensive literature reviews of related treatments (e.g., National Standards Project, National Professional Development Center) have approved of or rated the treatment package as having a strong evidence base; authorities are in agreement about the level of evidence.
- There exist ample high quality studies that demonstrate experimental control and favorable outcomes of treatment package.
 - Minimum of two group studies or five single subject studies or a combination of the two.
 - Studies were conducted across at least two independent research groups.
 - Studies were published in peer reviewed journals.
- There is a published procedures manual for the treatment, or treatment implementation is clearly defined (i.e., replicable) within the studies.
- Participants (i.e., N) are clearly identified as individuals with autism spectrum disorders or developmental disabilities.

Notes: At this level, include ages of participants and disabilities identified in body of research

Level 2 – Established or Moderate Evidence (DHS 107 - Proven & Effective Treatment)

- Other authoritative bodies that have conducted extensive literature reviews of related treatments (e.g., National Standards Project, NPDC) have approved of or rated the treatment package as having at least a minimal evidence base; authorities may not be in agreement about the level of evidence.
- There exist at least two high quality studies that demonstrate experimental control and favorable outcomes of treatment package.
 - Minimum of one group study or two single subject studies or a combination of the two.
 - Studies were conducted by someone other than the creator/provider of the treatment.
 - Studies were published in peer reviewed journals.
- Participants (i.e., N) are clearly identified as individuals with autism spectrum disorders or developmental disabilities.

Notes: At this level, include ages of participants and disabilities identified in body of research

Level 3 – Emerging Evidence (DHS 107 – Promising as a Proven & Effective Treatment)

- Other authoritative bodies that have conducted extensive literature reviews of related treatments (e.g., National Standards Project, NPDC) have recognized the treatment package as having an emerging evidence base; authorities may not be in agreement about the level of evidence.
- There exists at least one high quality study that demonstrates experimental control and favorable outcomes of treatment package.
 - May be one group study or single subject study.
 - Study was conducted by someone other than the creator/provider of the treatment.
 - Study was published in peer reviewed journal.
- Participants (i.e., N) are clearly identified as individuals with autism spectrum disorders or developmental disabilities.

Notes: The National Standards Project identifies massage therapy as an emergent therapy. Some preliminary work in this area, most of it by Silva and colleagues, has shown positive treatment effects for Qigong massage on language, sensory symptoms, stereotypical behavior, on-task behavior, bowel patterns, autism severity, and sleep for children with autism, and for improvement of parental stress. Participants had an autism diagnosis prior to the study and were receiving early childhood services.

Level 4 – Insufficient Evidence (Experimental Treatment)

- Other authoritative bodies that have conducted extensive literature reviews of related treatments (e.g., National Standards Project, NPDC) have not recognized the treatment package as having an emerging evidence base; authorities are in agreement about the level of evidence.
- There is not at least one high quality study that demonstrates experimental control and favorable outcomes of treatment package.
 - Study was conducted by the creator/provider of the treatment.
 - Study was not published in a peer reviewed journal.
- Participants (i.e., N) are not clearly identified as individuals with autism spectrum disorders or developmental disabilities.

Notes:

Level 5 – Untested (Experimental Treatment) &/or Potentially Harmful

- Other authoritative bodies that have conducted extensive literature reviews of related treatments (e.g., National Standards Project, NPDC) have not recognized the treatment package as having an emerging evidence base; authorities are in agreement about the level of evidence.
- There are no published studies supporting the proposed treatment package.
- There exists evidence that the treatment package is potentially harmful.**
 - Authoritative bodies have expressed concern regarding safety/outcomes.
 - Professional bodies (i.e., organizations or certifying bodies) have created statements regarding safety/outcomes.

Notes:

Date: October 30, 2015

Committee Members Completing Initial Review of Research Base: Amy Van Hecke, Shannon Stuart

Committee Decision on Level of Evidence to Suggest the Proposed Treatment is Proven and Effective:
Level 3 - Emerging Evidence

References Supporting Identification of Evidence Levels:

- Chambless, D.L., Hollon, S.D. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology, 66(1)* 7-18.
- Chorpita, B.F. (2003). The frontier of evidence---based practice. In A.E. Kazdin & J.R. Weisz (Eds.). *Evidence-based psychotherapies for children and adolescents* (pp. 42---59). New York: The Guilford Press.
- Odom, S. L., Collet-Klingenberg, L., Rogers, S. J., & Hatton, D. (2010). Evidence-based practices in interventions for children and youth with autism spectrum disorders. *Preventing School Failure, 54(4)*, 275-282.

Section Four: Literature Review

Research Included in Determination Decision:

- Escalone, A., Field, T., Singer-Strunck, R. Cullen, C., and Hartshorn, K. (2001). Brief Report: Improvements in the behavior of children with autism following massage therapy. *Journal of Autism and Developmental Disorders*, 31(5), 513-516.
- Silva, L. M., Schalock, M., Gabrielsen, K. R., Budden, S. S., Buenrostro, M., & Horton, G. (2015). Early Intervention with a Parent-Delivered Massage Protocol Directed at Tactile Abnormalities Decreases Severity of Autism and Improves Child-to-Parent Interactions: A Replication Study. *Autism research and treatment*, 2015. (new to Oct 2015 re-review)
- Silva, L.M.T., and Schalock, M. Treatment of tactile impairment in young children with autism: Results with Qigong massage (2013). *International Journal of Therapeutic Massage and Bodywork*, 6(4), 12-20.
- Silva, L.M.T., Schalock, M., Ayres, R., Bunse, C., and Budden, S. (2009) Qigong massage treatment for sensory and self-regulation problems in young children with autism: A randomized controlled trial
- Silva, L.M.T., Ayres, R., and charlock, M. (2008). Outcomes of a pilot training program in a Qigong massage intervention for young children with autism. *The American Journal of Occupational Therapy*, 62(5), 538-546.
- Silva, L.M.T., Cignolini, A., Warren, R., Budden, S., and Kowron-Gooch, A. (2007) Improvement in sensory impairment and social interaction in young children with autism following treatment with an original Qijong massage methodology. *The American Journal of Chinese Medicine*, 35(3), 393-406.

Research Reviewed:

- Brondino, N., Fusar-Poli, L., Rocchetti, M., Provenzani, U., Barale, F., & Politi, P. (2015). Complementary and Alternative Therapies for Autism Spectrum Disorder. *Evidence-Based Complementary and Alternative Medicine*, 2015. (review study examined for informational purposes)
- Burke, A. (2014). Zen Shiatsu: A Longitudinal Case Study Measuring Stress Reduction in a Child with Autism Spectrum Disorder. *International journal of therapeutic massage & bodywork*, 7(4), 23.(article did not meet criteria for full inclusion in review)
- Cullen-Powell, L. A., Barlow, J. H., & Cushway, D. (2005). Exploring a massage intervention for parents and their children with autism: the implications for bonding and attachment. *Journal of Child Health Care*, 9(4), 245-255. (article did not meet criteria for full inclusion in review)
- Field, T., Lasko, Mundy, Henteleff, Kabat, Talpins, & Dowling, M. (1997). Brief report: Autistic children's attentiveness and responsivity improve after touch therapy. *Journal of Autism and Developmental Disorders*, 27(3), 333-338. (article did not meet criteria for full inclusion in review)
- Piravej, K., Tangtrongchitr, P., Chandarasiri, P., Paothong, L., & Sukprasong, S. (2009). Effects of Thai traditional massage on autistic children's behavior. *The Journal of Alternative and Complementary Medicine*, 15(12), 1355-1361. (article did not meet criteria for full inclusion in review)
- Silva, L. M., Schalock, M., & Gabrielsen, K. (2011). Early intervention for autism with a parent-delivered qigong massage program: A randomized controlled trial. *American Journal of Occupational Therapy*, 65(5), 550-559. (article did not meet criteria for full inclusion in review)

- Tsuji, S., Yuhi, T., Furuhara, K., Ohta, S., Shimizu, Y., & Higashida, H. (2015). Salivary oxytocin concentrations in seven boys with autism spectrum disorder received massage from their mothers: a pilot study. *Frontiers in psychiatry*, 6. (article did not meet criteria for full inclusion in review)
- Yunus, F. W., Liu, K. P., Bissett, M., & Penkala, S. (2015). Sensory-Based Intervention for Children with Behavioral Problems: A Systematic Review. *Journal of autism and developmental disorders*, 1-15. (review study examined for informational purposes)